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Goren et al.(10) **Pub. No.: US 2021/0299101 A1**(43) **Pub. Date: Sep. 30, 2021**(54) **SYSTEMS, METHODS, AND KITS FOR
DIAGNOSTICS AND TREATMENT OF VIRAL
RESPIRATORY INFECTION**2020, provisional application No. 62/704,416, filed
on May 8, 2020, provisional application No. 62/704,
531, filed on May 14, 2020.(71) Applicant: **Applied Biology, Inc.**, Irvine, CA (US)**Publication Classification**(72) Inventors: **Ofer A. Goren**, Irvine, CA (US); **John
McCoy**, Irvine, CA (US)(51) **Int. Cl.**
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A61K 45/06 (2006.01)(21) Appl. No.: **17/301,178**(52) **U.S. Cl.**
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(2013.01)(22) Filed: **Mar. 29, 2021****Related U.S. Application Data**(63) Continuation-in-part of application No. 16/946,875,
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788, filed on May 21, 2020.(60) Provisional application No. 63/041,426, filed on Jun.
19, 2020, provisional application No. 63/001,629,
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63/004,171, filed on Apr. 2, 2020, provisional appli-
cation No. 63/004,398, filed on Apr. 2, 2020, provi-
sional application No. 62/704,126, filed on Apr. 22,(57) **ABSTRACT**

The present disclosure includes methods, systems, kits and compositions for treating, preventing and diagnosing viral infections, specifically SARS-CoV-2 infections, with an anti-androgen and anti-thyroid medication, a thyroid receptor antagonist, a TGF- β inhibitor or a combination thereof. The present disclosure also describes methods and compositions for the treatment of viral respiratory diseases, specifically SARS-CoV-2 infections, including anti-androgens, anti-thyroid medications, thyroid receptor antagonists, TGF- β inhibitors, RXR inhibitors, furin inhibitors or other agents to disrupt the androgen signaling.